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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,082	01/19/2001	Ole Kirkeby	4925-97	9423

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EXAMINER

WOO, STELLA L

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 07/07/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/766,082

**Applicant(s)**

KIRKEBY, OLE

**Examiner**

Stella L. Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5-6, 10-19, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Bauck (US 6,633,648 B1).

Regarding claims 1, 18, Bauck discloses an audio system (Figs. 2, 3a) for spatially widening a stereophonic sound stage (3D loudspeaker array for enlarged sweet spot; Abstract) provided by at least two loudspeakers (left loudspeaker 52 and right loudspeaker 56; Fig. 2), the system comprising:

a pair of left and right loudspeakers (left loudspeaker 52 and right loudspeaker 56);

a left channel audio input (Fig. 3a, input to block 72);

a right channel audio input (input to block 71);

a first filter stage (72);

a second filter stage (71);

a third filter stage (74);

a fourth filter stage (73).

Regarding claims 5 and 19, a delay device is provided (col. 13, lines 17-26; col. 17, lines 27-32).

Regarding claim 6, frequencies up to 2.5 kHz are handled (col. 12, lines 21-25).

Regarding claims 10-17, 26, Bauck teaches application in a television set or computer monitor (Figs. 11 and 12; col. 10, lines 21-25; col. 15, line 61 – col. 16, line 2).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauck in view of Gardner (US 6,243,476 B1).

Bauck differs from claims 2-4, 20-22 in that it does not specify the gain being smaller than one. However, Gardner teaches the desirability of the gain being less than 1 in a crosstalk circuit (col. 7, lines 57-58) such that it would have been obvious to an artisan of ordinary skill to select the gain in the Bauck circuit as being less than one for stability purposes, as taught by Gardner.

5. Claims 6-9, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauck in view of Tanner, Jr. et al. (US 6,307,941, hereinafter "Tanner").

Bauck differs from claims 6-9, 23-25 in that it does not specify an FIR filter or an IIR filter. However, Tanner teaches the well known use of either FIR filters or IIR filters in a virtual sound system (col. 6, line 64 – col. 7, line 10) such that it would have been obvious to an artisan

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of ordinary skill to incorporate such well known use of FIR or IIR filters, as taught by Tanner, to provide the filtering functions in Bauck.

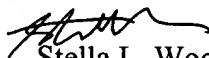
*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fujita et al., Elliott et al., Abel, and Takeuchi show other stereophonic sound systems. Gerzon shows another stereophonic sound system in which the gain is less than one (col. 16, lines 61-64).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stella L. Woo whose telephone number is (703) 305-4395. The examiner can normally be reached on Monday-Tuesday, Thursday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Stella L. Woo  
Primary Examiner  
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